PALAS®

MFP System

FILTER MEDIA TEST RIG

Flexible and highly accurate

Made in Germany

Flexible and highly accurate: MFP System

Filter materials of various types ensure clean air indoors. Palas® rigs test a wide range of filter materials, from vacuum cleaners and cabin air filters to engine air filters.

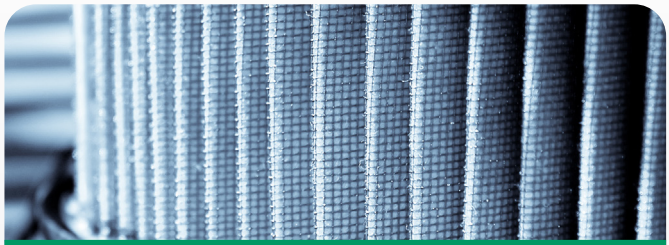
The range of test tasks is just as wide as the spectrum of different filter materials, whether they are used as prefilters, main filters, coarse filters or high-performance HEPA filters.

Palas® offers manufacturers of filter materials measuring systems with which they can reliably and at any time reproducibly determine the separation behavior as a function of the particle size. Likewise, the service life, pressure drop and volume flow are relevant parameters that are measured in a standard-compliant and economical manner.

With the modular MFP System for flat filter media and small mini filters, exactly these parameters are observed.

Application examples

ROOM AIR FILTER



ENGINE AIR FILTER

COMPRESSED AIR FILTER

CABIN FILTER

VACUUM CLEANER FILTER

ROOM AIR PURIFIER

Principle of operation

With the **MFP System**, Palas® offers high-precision testing systems for the development and quality control of filter media.

Depending on the test requirements according to standards such as ISO 16890, EN 779, ASHRAE 52.2, DIN 71460-1, ISO TS 11155-1, ISO 5011 or special requirements from practice, the **MFP** test rigs are equipped with different systems for aerosol generation, aerosol discharge, aerosol dilution and air humidifiers.

Different test aerosols, such as SAE Fine and Coarse, NaCl/KCl, DEHS are used. The test aerosols are fed into the test channel in a defined manner and homogeneously mixed with the test volume flow.

The clear determination of the fractional separation efficiency is then carried out with high precision by means of the aerosol spectrometers Promo® 1000, Promo® 2000 and Promo® 3000. The wide range of interchangeable welas® sensors allows the optimal adjustment of the measurement technique even for particle concentrations up to 1 g/m^3 with SAE dust according to ISO 12103-1.

MFP System

MFP 1000

- Particularly wide measuring range with Promo® 1000: 0.12 – 40 µm
- Variant for measurement of HEPA/ULPA filters available

MFP 2000

- Measuring range with Promo® 2000: 0.2 – 40 µm
- Fast and cost-effective quality control for filter media

MFP 3000

- Measuring range with Promo® 3000: 0.2 – 40 µm
- Automatic switching between raw and clean gas measurement
- Flexible system due to variants for special standards, large filter media or humidity and temperature control

MFP 4000

- Measuring range with 2x Promo® 2000: 0.2 – 40 µm
- High accuracy due to simultaneous particle measurement in raw and clean gas

Special advantages and benefits

State-of-the-art measurement technology

- Sequence programs for fractional collection efficiency measurement, pressure drop measurement and loading measurement
- Particle size measurement: 0.12 – 40 µm
- Easy use of different test aerosols, e. g. SAE Fine and Coarse, NaCl/KCl, DEHS

Accuracy

- High reproducibility of the test method
- Internationally comparable measurement results

Easy operation and flexibility

- Filter testing software FTControl
- Mobile design, easy to move on rollers
- Low maintenance

Technical features

Measuring range (size)	0.12 – 40 µm (MFP 1000) 0.2 – 40 µm (MFP 2000, MFP 3000, MFP 4000)
Volume flow	1 – 35 m^3/h - pressurized operation (MFP 1000, MFP 2000) 1 – 35 m^3/h - suction mode (MFP 3000, MFP 4000)
Aerosol concentrations	Up to 1,000 mg/m^3 (depending on the version)
Inflow velocity	5 – 100 cm/s (others on request)
Differential pressure measurement	0 – 1,200 Pa selectable 0 – 2,500 Pa selectable 0 – 5,000 Pa selectable
Test area of the medium	100 cm^2 MFP 3000 with FTD 300: 400 cm^2
Aerosols	Dusts (e. g. SAE dusts), salts (e. g. NaCl, KCl), liquid aerosols (e. g. DEHS)
Compressed air supply	6 – 8 bar
Dimensions (H • W • D)	1,800 • 600 • 900 mm (MFP 1000, MFP 2000) 2,500 • 680 • 1,550 mm (MFP 3000)

PALAS®
a Brockhaus Technologies company

Palas® is a leading developer and manufacturer of highprecision instruments for the generation, measurement and characterization of particles in air.

With more than 30 active patents, Palas® develops technologically leading and certified fine dust and nanoparticle analyzers, aerosol spectrometers, generators and sensors as well as related systems and software solutions. Palas® was founded in 1983 and employs more than 100 people.

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